AMENDMENTS

In the Specification:

Please delete the title on page 1, lines 2-3, and replace with the following title:

A1 Device and Method for Analyzing and Representing Sound Signals in Musical Notation

Please delete the paragraph beginning on page 8, line 17, and continuing to page 9, line 5, and replace with the following paragraph:

A2 Fig. 2 is a block diagram illustrating a general hardware setup of a personal computer that functions as a sound signal analyzing device in accordance with an embodiment of the present invention. This personal computer is controlled by a CPU 21, to which are connected, via a data and address bus 2P, various components, such as a program memory (ROM) 22, a working memory 23, an external storage device 24, a mouse operation detecting circuit 25, a communication interface 27, a MIDI interface 2A, a microphone interface 2D, a keyboard (K/B) operation detecting circuit 2F, a display circuit 2H, a tone generator circuit 2J and an effect circuit 2K. While the personal computer may include other hardware components, the personal computer according to this embodiment will be described below as only including these hardware resources essential for implementing various features of the present invention.

Please delete the paragraph on page 10, lines 7-29, and replace with the following paragraph:

A3 Further, the personal computer of Fig. 2 may be connected via the communication interface 27 to a communication network 28, such as a LAN (Local Area Network), the Internet or telephone line network, to exchange data (e.g., composition information with associated data) with a desired server computer. Thus, in a situation where the operating programs and various data are not contained in the personal computer, these operating programs and data can be downloaded from the server computer to the personal computer. Specifically, in such a case, the

personal computer, which is a "client", sends a command to request the server computer 29 to download the operating programs and various data by way of the communication interface 27 and communication network 28. In response to the command, the server computer 29 delivers the requested operating programs and data to the personal computer via the communication network 28. Then, the personal computer receives the operating programs and data via the communication interface 27 and stores them into the RAM 23 or the like. In this way, the necessary downloading of the operating programs and various data is completed.

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Please delete the paragraph on page 13, lines 8-15, and replace with the following paragraph:

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Now, with reference to Figs. 1 and 3 to 10, a detailed description will be made about the exemplary behavior of the personal computer of Fig. 2 when it functions as the sound signal analyzing device. Fig. 1 is a flow chart of a main routine executed by the CPU 21 of the personal computer functioning as the sound signal analyzing device.

Please delete the paragraph beginning on page 20, line 29, and continuing to page 22, line 27, and replace with the following paragraph:

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Next, in the main routine, a determination is made as to whether the level setting button 73A has been operated in the user setting area 73 of the parameter setting screen 70, and with an affirmative (YES) determination, a sound-volume threshold value setting process is carried out as shown in Fig. 4. In this sound-volume threshold value setting process, the dialog screen of Fig. 9 is displayed, and detection is made of a volume level of the vocal sound input via the microphone 2C. Then, the color of the level meter area 91 is varied in real time in accordance with the detected sound volume level. Displayed position of the pointer 92 indicating a maximum sound volume level, i.e., a criterion or reference level, is determined in the following manner. Namely, it is ascertained whether or not the currently-detected sound volume level is

higher than the currently-set reference level. If so, the criterion or reference level, i.e., the maximum sound volume level, and the displayed position of the pointer 92 are changed in conformity to the currently detected sound volume level. If, on the other hand, the currently-detected sound volume level is lower than the current reference level, it is further determined whether the sound volume level has been found to be decreasing consecutively over the last n detections; if so (YES), the reference level, i.e., the maximum sound volume level, and the displayed position of the pointer 92 are changed in conformity to the currently detected sound volume level. If the currently-detected sound volume level is lower than the current reference level but the sound volume level has not necessarily been decreasing consecutively over the last n detections, it is further determined whether the sound volume level has been lower than a predetermined "a" value (e.g., 90% of the reference level) consecutively over the last m (m<n) detections; if so (YES), the reference level, i.e., the maximum sound volume level, and the displayed position of the pointer 92 are changed in conformity to the currently-detected sound volume level similarly to the above-mentioned. If, on the other hand, the sound volume level has not been lower than the "a" value consecutively over the last m detections, the current reference level is maintained. Through such a series of operations, the criterion or reference level, i.e., the maximum sound volume level, and the displayed position of the pointer 92 can be varied. The series of operations is repeated until the confirming (OK) button 95 is operated, upon which a sound volume threshold value, for use in pitch detection, key-on event detection or the like, is set in accordance with the maximum sound volume level (reference level) being displayed on the dialog screen of Fig. 9. For instance, a pitch detection process may be performed on sound signals having a volume level greater than the sound volume threshold value, or a process may be performed for detecting, as a key-on event, every detected sound volume level greater than the sound volume threshold value.

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Please delete the paragraph on page 35, lines 3-18, and replace with the following paragraph:

Sound signal is received which contains sound characteristics to be represented in musical notation. The characteristics, such as a volume level of the sound signal, are extracted out of the received sound signal, and various parameters for use in subsequent analysis of the sound signal are set in accordance with the extracted characteristics. Also, a desired scale determining condition is set by a user. Pitch of the sound signal is determined using the thus-set parameters. The determined pitch is rounded to any one of scale notes, corresponding to the user-set scale determining condition. Also, a given unit note length is set as a predetermined criterion or reference for determining a note length, and a length of the scale note determined from the received sound signal is determined using the thus-set unit note length as a minimum determination unit, i.e., with an accuracy of the unit note length.

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